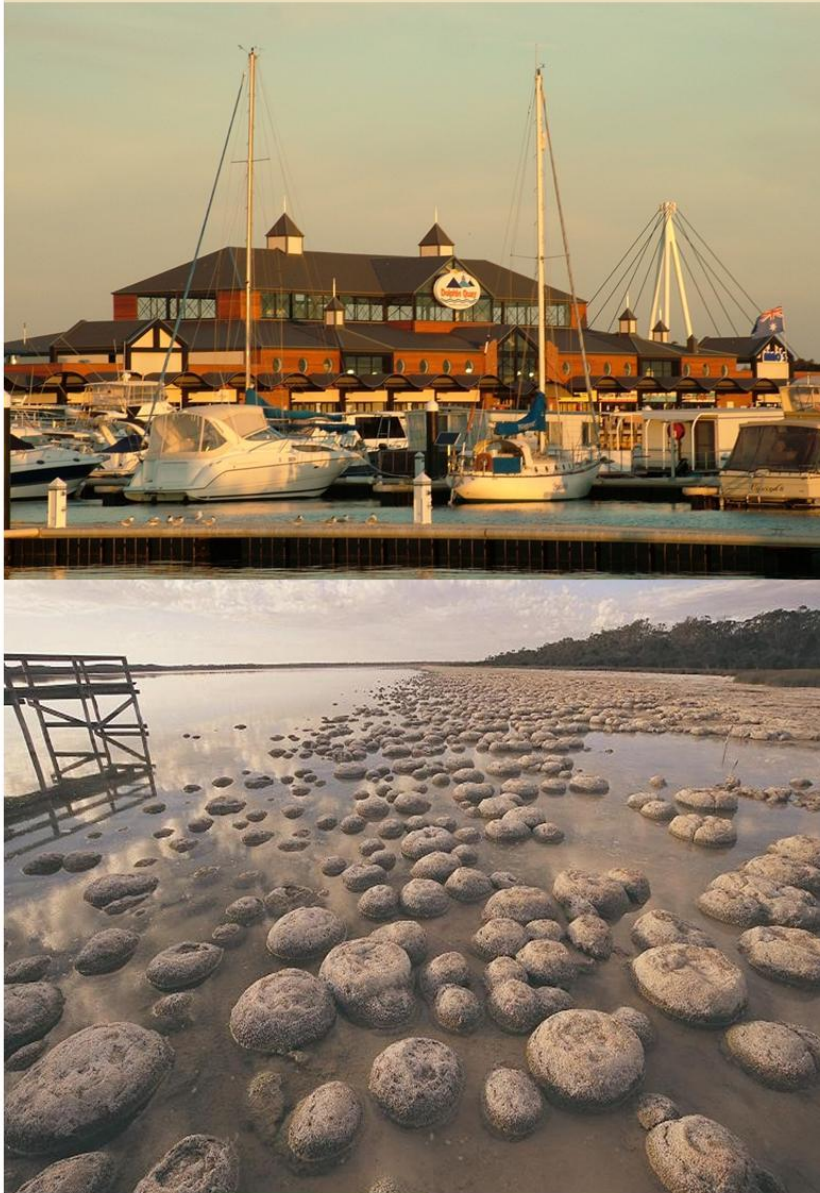


Peel Development Commission



Peel Profile—March 2012

The Peel Region Map





What's New in this Edition

Population

Labour Force

Unemployment

Agriculture

Building and Construction

Project Investment

Education

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The data contained in this publication is sourced mainly from State and Federal government agencies. A small amount is obtained from industry organisations and company publications and web sites. All data and information included is the most recent available. The Peel Profile is updated quarterly and released at the end of each quarter.

OVERVIEW

This publication presents a selection of interesting facts and figures relating to social, economic and environmental aspects of the Peel Region. Its purpose is to provide data and information to potential immigrants to the region, from both within Australia and overseas, students and educators, both private business and government organisations, and wider community members.

Peel is one of nine regions of Western Australia. It encompasses the five local government areas of Boddington, Murray, Serpentine-Jarrahdale and Waroona Shires and the City of Mandurah. Located 75 km south of Perth, it is Western Australia's smallest region geographically, covering 5,648 km².

Peel's landscape is geographically diverse with urban, agricultural and horticultural land, a forested escarpment and plateau, a major flood plain (the palus plain), and 137 kms of inland waterways and 50 kms of coastline.

Peel is the fastest growing regional area in WA with a growth rate of 4.6% from 2010-2011. Serpentine-Jarrahdale is the fastest growing local government area in the State with annual increase of 6.9% between 2010-2011 and Mandurah the third fastest with a growth rate of 5.3% for the same period. At 30 June, 2011 the Peel Region had an estimated resident population of 113,531 with the majority of the population (65%) concentrated in Mandurah City.

In 2010-2011 the Peel Region's Gross Regional Product (GRP) was valued at \$10.7 billion (4.9% of the Gross State Product), representing a 26.6% increase over the previous year. Mining and construction are the leading contributors to the economy of the Peel Region with manufacturing, retail, tourism, agriculture, fishing and forestry making valuable contributions. Manufacturing industries include fabricated metal products, transport equipment and food processing.

Bauxite, gold and copper are mined in the Peel Region. Bauxite from Alcoa's mines at McCoy (near Dwellingup) and Waroona along with Worsley's mine at Boddington provide the entire feedstock for Western Australia's total output of alumina which is

refined at the Pinjarra, Wagerup, Kwinana and Worsely refineries. Gold and copper are mined at Newmont's Boddington Gold Mine which is expected to be the largest open cut gold mine in Australia when it reaches full production. The total value of mining in the Peel Region in 2010-11 was \$3.4 billion.

Building and construction accounted for 19.5% of the Peel economy in 2010-11. Building approvals totalled \$431.4 million for this period with residential approvals making up 92% of total approval values.

The value of retail trade continues to rise steadily in the Peel Region. The retail industry had an estimated turnover of \$1,022 million in the year ending June 2011, an increase from the previous year greater than that of any other regions in Western Australia. In 2010 the tourism industry brought 380,800 visitors to the region contributing \$139.4 million to the Peel economy (averaged from 2008/09/10).

Despite a strong economy, the Peel Region has a long history of higher than State average unemployment. For the September quarter 2011, there were 49,373 people in the Peel's labour force and the unemployment rate was 6.0%. The State average for this time was 4.2%.

The Peel Development Commission continues to pursue projects to benefit the Peel Region including the *Peel Economic Development Initiative* - a focused program of strategic activities to create opportunities for investment-led growth in the region.

Table 1. Facts at Glance

Key Indicators	Peel Region	Western Australia
Area	5,648 km ²	2.5 million km ²
Estimated Population	113,531	2,349,325
Population Growth (Annual Average Growth 5 Years To 2011)	4.7%	2.7%
% Of Persons 65 And Over	18.5%	11.9%
% Persons Under 15	18.8%	19.4%
Labour Force (Sept 2011)	49,373	1,313,062
Unemployment Rate (Sept 2011)	6.0%	4.2%
Mean Taxable Income (2008-09)	\$62,460	\$60,001
Gross Regional Product	\$10,702.7 million 4.9% Gross State Product	\$216.6 million
Main Industries By Percentage Of GRP (2011)	Mining, construction, manufacturing	Mining, manufacturing, construction
Main Industries By Number Of Persons Employed 2006	Construction, manufacturing, retail trade	Retail trade, manufacturing, health care & social services
Estimated Visitor Numbers (Annual Average (2008/09/10))	380,800	5,988,100

Source: ABS: Department of Education, Employment and Workplace Relations; Tourism Western Australia; Government of Western Australia.

POPULATION

The estimated resident population of the Peel Region as at June 30, 2011 was 113,531 representing 4.83% of Western Australia's population of 2,349,325.

The majority of the population is located in the City of Mandurah (65.3%) followed by the Shires of Serpentine-Jarrahdale (16.2%), Murray (13.6%), Waroona (3.4%) and Boddington (1.5%).

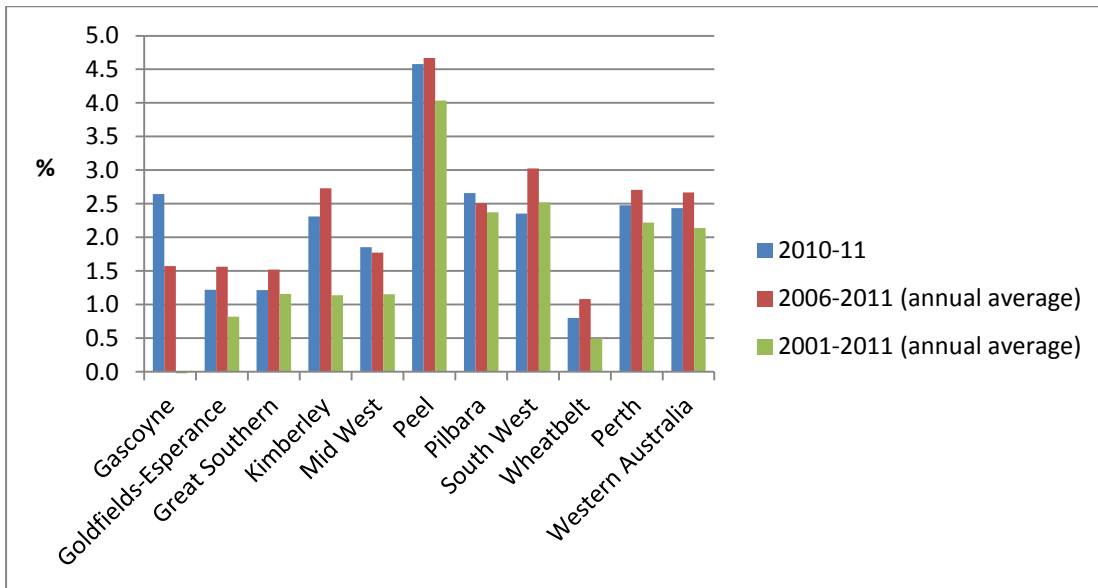
Table 2. Peel Population (Estimated) at June 30, 2011

LGA	Population	% Peel
Boddington	1,688	1.5
Mandurah	74,127	65.3
Murray	15,432	13.6
Serpentine-Jarrahdale	18,395	16.2
Waroona	3,889	3.4
Total	113,531	100

Source: ABS, Estimated Resident Population, 2011

Data shows that Peel continues its trend of being the fastest growing population in the State. The growth rates for the Peel population have been 4.6% for the past year, 4.7% averaged over the past five years and 4.0% averaged over past ten years – figures that are higher for any other region in the State and are significantly higher than the Western Australian averages which were 2.4% for the past year, 2.7% over the past five years and 2.1% over the last 10 years.

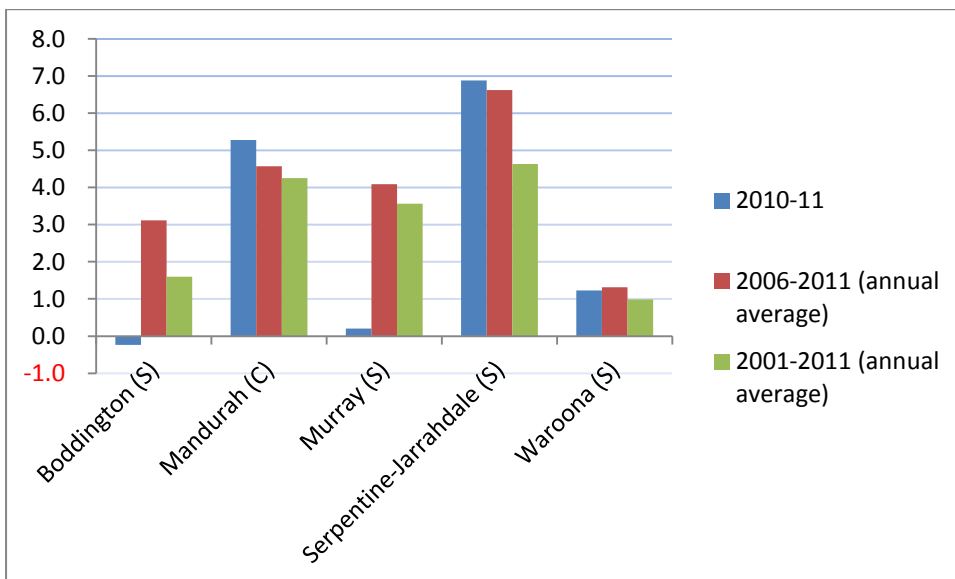
Figure 1. Population Growth Peel and WA



Source: Source: ABS, Estimated Resident Population, 2011

Serpentine-Jarrahdale and Mandurah are experiencing particularly high population growth with Serpentine-Jarrahdale being the fastest growing local government area in WA and Mandurah being the third fastest growing local government area in WA. The annual growth rate for Serpentine-Jarrahdale was 6.9% and for Mandurah, 5.3%.

Figure 2. Population Growth Peel



Source: Source: ABS, Estimated Resident Population, 2011

The Peel Region has a higher proportion of older residents than the Western Australia average. Residents aged 65 or older represent 18.5% of the total Peel population, compared to 11.9% in this age group as a percentage for the total Western Australia population. The balance between males (50.7%) and females (49.3%) is fairly even.



Growth Forecasts

Population forecasts predict the number of Peel residents to increase steadily at around 3% over the next ten years to reach 137,598 in 2020.

Table 3. Projected Population

Year	Population	Growth from 2010	Annual Average Growth	Average Annual Growth rate
2010	104,877			
2011	107,971	1 year 3,370	3,370	3.2%
2015	121,331	5 years – 16,730	3,346	3.1%
2020	137,598	10 years – 32,997	3,300	3.2%

Source: ABS, Projected Resident Population by Age & Sex, 2007 to 2027

ECONOMY

Labour Force

The Peel Region’s labour force stood at 49,373 persons for the September 2011 quarter. Mandurah (C) has the highest number of persons in the labour force with 30,853 persons representing 62.5% of the Peel labour force. Boddington Shire had the lowest number of persons in the labour force with 917 or 1.9 % of the Peel labour force.

Table 4. Regional Labour Force

Regional Labour Force as at September 2011 % of Peel Region Quarter

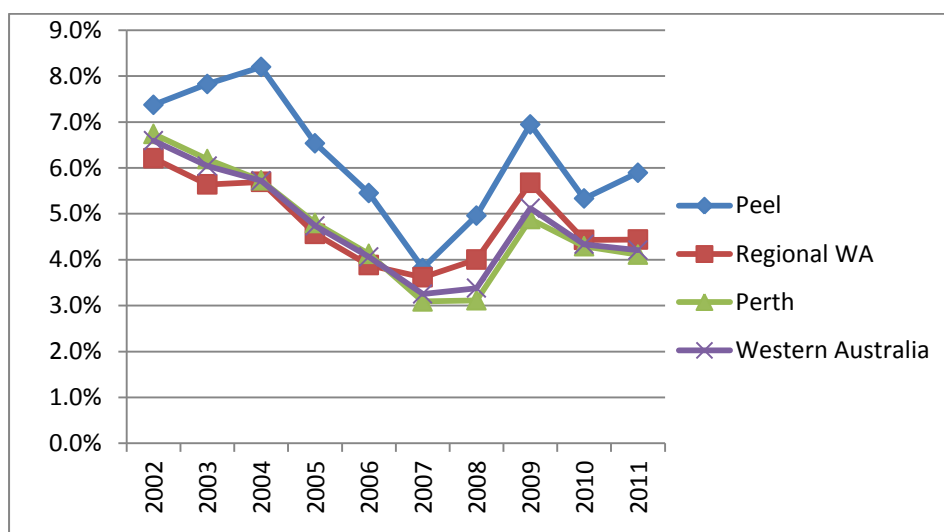
Boddington	915	1.9
Mandurah	30,853	62.5
Murray	6,853	13.8
Serpentine-Jarrahdale	8,625	17.5
Waroon	2,127	4.3
PEEL	49,373	100

Source: Department of Education, Employment & Workplace Relations with additional estimates by the Department of Regional Development and Lands

Unemployment

Historically, the Peel Region has had a higher unemployment rate than Perth, Regional WA, and Western Australian average.

Figure 3. Unemployment



Source: Department of Education, Employment & Workplace Relations with additional estimates by the Department of Regional Development and Lands

As at September Quarter 2011, Peel’s unemployment rate was 6.0% as compared to Western Australia at 4.2%, Perth 4.0% and Regional Western Australia 4.6%. The Peel Region’s unemployment rate in September 2011 was up slightly (0.6%) on the same quarter in 2010. In this time the unemployment rate for Western Australia dropped 0.3%.

Mandurah (C) had the highest unemployment rate at 7.0% while Serpentine-Jarrahdale (S) had the lowest unemployment rate of the region with 2.6

Table 5. Unemployment

	Number Unemployed	% Peel
Boddington	27	3.0%
Mandurah	2,154	7.0%
Murray	446	6.5%
Serpentine-Jarrahdale	221	2.6%
Waroona	112	5.3%
PEEL	2,960	

Source: Department of Education, Employment & Workplace Relations with additional estimates by the Department of Regional Development & Lands

Employment by Industry

The most recent data on employment by industry is from the 2006 Census. Data from then showed that the highest proportion of the Peel labour force was employed in the construction (13.6%), manufacturing (13.5%) and retail trade (12.4%) industries. Mining, despite being a significant contributor to the Peel economy only employed 5.2% of the labour force at the time of the 2006 census.



Table 6. Employment by industry

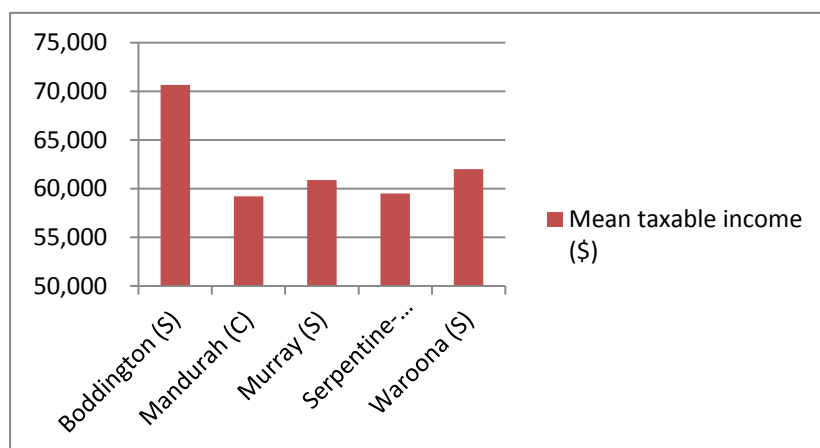
Industry	%
Construction	13.6%
Manufacturing	13.5%
Retail trade	12.4%
Health care & social assistance	8.4%
Education & training	6.4%
Accommodation & food services	5.6%
Mining	5.2%
Public administration & safety	4.7%
Other services	3.7%
Transport, postal & warehousing	3.7%
Professional, scientific & technical services	3.7%
Agriculture, forestry & fishing	3.2%
Administrative & support services	3.0%
Inadequately described/Not stated	2.9%
Wholesale trade	2.6%
Rental, hiring & real estate services	2.4%
Financial & insurance services	1.7%
Arts & recreation services	1.2%
Electricity, gas, water & waste services	1.0%
Information media & telecommunications	1.0%

Source: ABS, 2006, Census of Population and Housing

Income

In 2008-09 the Peel Region Mean Taxable Income (MTI) was \$62,460, slightly higher than the State at \$60,001. Boddington (S) had the highest MTI with \$70,663. Mandurah (C) had the lowest MTI with \$59,218.

Figure 4. Mean Taxable Income, 2008-2009



Source: Australian Taxation Office

Gross Regional Product

The Gross Regional Product (GRP) for Peel was valued at \$10.7 billion in 2011, representing 4.9% of the Gross State Product. Mining remained the leading contributor to the region's economy growing its share of GRP by 7.4% to 36.8% due to increased output from Boddington Gold Mine. Construction increased to 19.5% remaining as the second largest contributor followed by manufacturing at 7.1%.

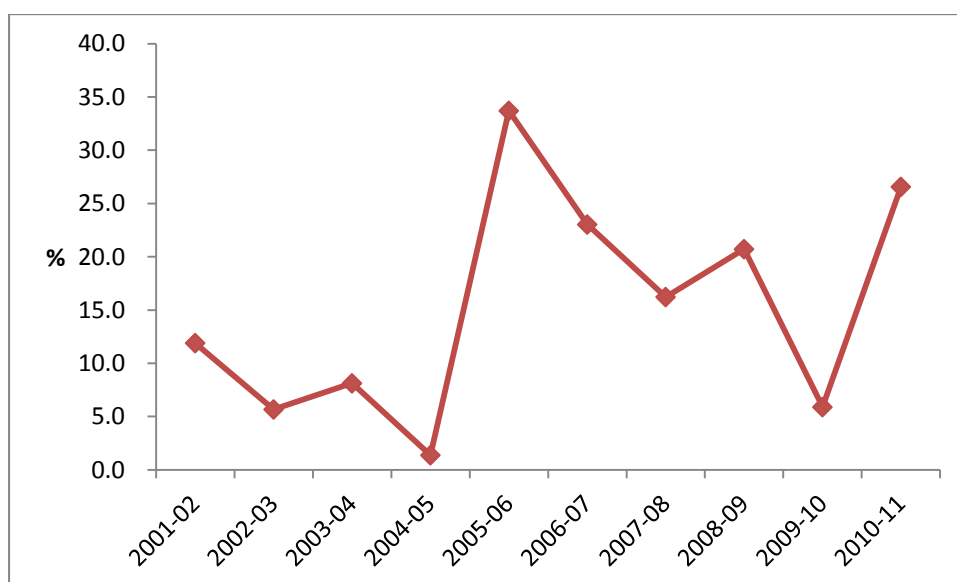
Table 7. Gross Regional Product Share by Industry 2011

Industry	2010-11
Agriculture, Forestry and Fishing	1.1%
Mining	36.8%
Manufacturing	7.1%
Electricity, Gas and Water Supply	2.2%
Construction	19.5%
Wholesale Trade	1.4%
Retail Trade	2.4%
Accommodation, Cafes and Restaurants	1.2%
Transport and Storage	4.7%
Communication Services	0.9%
Finance and Insurance	2.4%
Rental, Hiring and Real Estate Services	1.6%
Professional, Scientific and Technical Services	3.1%
Administrative and Support Services	1.8%
Government Administration and Defence	2.3%
Education	2.3%
Health and Community Services	2.9%
Cultural and Recreational Services	0.3%
Personal and Other Services	6.0%

Source: Department of Regional Development & Lands

Nominal growth for the twelve months to June 2011 was 26.6%, well up on the previous year of just 5.9%. This is the second highest increase in ten years, the highest being in 2005-06 with 33.7%. The lowest growth was in 2005 with just 1.4%

Figure 5. Peel Nominal Growth of Gross Regional Product



Source: Estimated by the Department of Regional Development and Lands

Mining

Bauxite, gold and copper are the mined in the Peel Region. In the 2010-2011 financial year the estimated value of minerals mined and processed in Peel was almost \$3.446 million. This represents a 29% increase over the previous year and is mainly due to increased production levels at the Boddington Gold Mine.

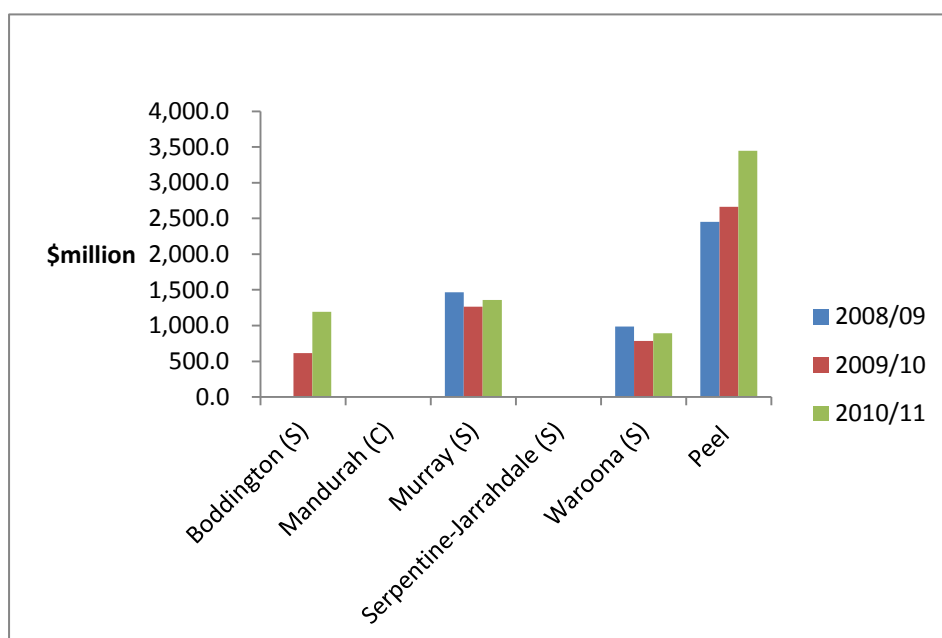
Boddington Gold Mine – now owned by Newmont – reopened in 2010 after a period of closure and is expected to be Australia’s largest gold producer when it reaches full production. The Boddington Gold Mine produced 22.3 tonnes of gold valued at \$1,194 million – 12% of the State’s gold value in the 2010-2011 period. During this time the mine also produced 27,000 tonnes of copper.

Alcoa mines bauxite at the Willowdale mine in Waroona and the Huntly mine at

McCoy near Dwellingup. Currently, Huntly Mine is the largest bauxite mine in the world. Output from these mines is processed into alumina at the Pinjarra and Wagerup refineries – both located inside the Peel Region, as well as the Kwinana Refinery. BHP’s Worsely has a bauxite mine in the Boddington Shire from which ore is transported overland via conveyer belt for processing at the Worsely refinery in the Shire of Collie. Together the Huntly and Willowdale mines produce the total feedstock for WA’s alumina refineries.

Alcoa has government approval for a \$1.5 billion expansion of its Wagerup Refinery which has been placed on hold due to the economic downturn.

Figure 6. Peel Value of Minerals Production



Source: Department of Mines and Petroleum

According to the Department of Mines and Petroleum approximately 6,800 people were employed in the mining industry in the Peel Region in 2011. Just over 4,100 of these were directly employed in mining bauxite and gold. A further 2,600 were employed in processing refineries producing alumina.

Manufacturing

The major manufacturing industries in the Peel include metal products, machinery and equipment and food processing. Income generated from Peel’s manufacturing

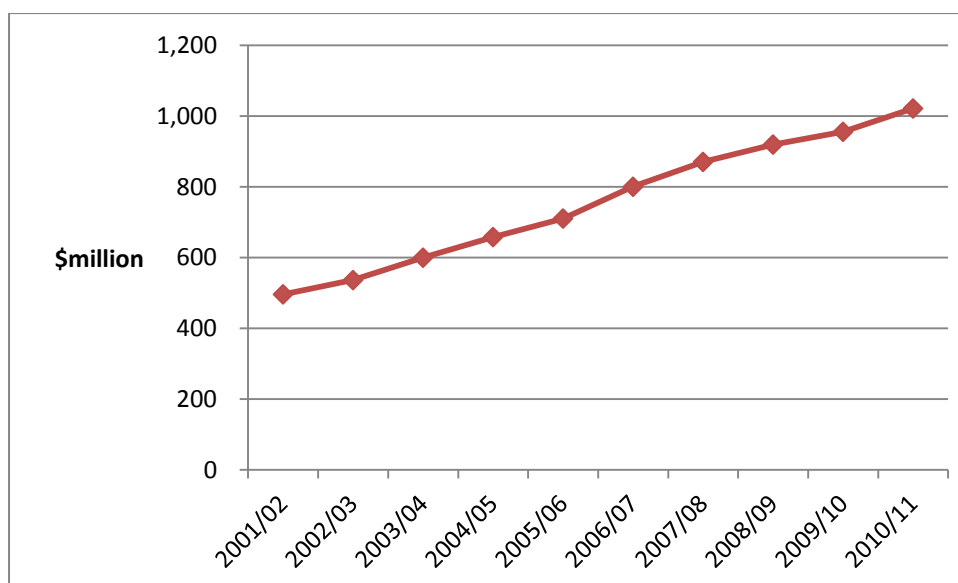
industry contributed 7.1% to Peel’s Gross Regional Product.

Retail

The Peel Region has a broad range of retail facilities ranging from local community shops to major shopping centres. There are hundreds of speciality outlets and services with opportunities for many more as the population of the Region grows. . In 2010-2011 retail trade contributed \$1,022 million to the Peel economy and comprised 3.8% of the State’s economy.

Retail trade has steadily been increasing in the Peel Region over the last decade, most likely due to its increasing population. From the 2010 to 2011 financial years the value of retail trade in the Peel Region increased by 6.9%. This is the largest increase in any region of Western Australia. The State’s total retail turnover only increased 4.0% during this time.

Figure 7. Value of Retail Trade



Source: ABS and Regional Development and Lands

Building and construction

Building and construction accounted for 19.5% of the Peel economy in 2010-11, the second highest contribution behind mining. For 2010-2011 there were 1663 residential approvals for the Peel Region valued at \$395.7 million dollars. This is 6.24% of total residential building approvals for WA.

55.4% of the value of residential approvals was for the City of Mandurah with 891

residential dwellings being approved and 29.2% was in the Shire of Serpentine-Jarrahdale with 528 dwellings being approved. The average value of a residential approval in Peel in 2010-2011 was \$237,945.

Table 8. Residential building approvals 2010-2011

	Number	Average Value	Total Value \$million	Peel %
Boddington (S)	25	\$256,720	\$6.42	1.62
Mandurah (C)	891	\$246,216	\$219.4	55.4
Murray (S)	180	\$249,844	\$45.0	11.4
Serpentine- Jarrahdale (S)	528	\$218,901	\$115.6	29.2
Waroona (S)	39	\$239,871	\$9.4	2.4
Peel	1663	\$237,945	\$395.7	100

Source: ABS

The Peel Region experienced a decrease of 3.8% in the value of its residential building approvals from the previous financial year. This is better than the corresponding decrease in residential building approvals of 6.7% for the whole of Western Australia.

While residential building dominates the Region's construction activities, the value of non-residential approvals totaled \$50.8 million for the 2010-11 period. This represents a decrease of 65.6% from the previous financial year and is consistent with a decrease of 58% over the whole of WA.

Most recent data is from the September Quarter 2011. In this quarter Peel residential approvals totalled 87.4 million, and non-residential approvals totalled 19.6 million.

Tourism

Tourism Western Australia provides data based on rolling averages from three yearly periods. Based on 2008/2009/2010 data this it was estimated that in 2010 380,800 tourists per year visited the Peel. This number comprised 358,400 domestic visitors and 22,400 international visitors. International tourist

visits increased by 35.8% from the previous period however the overall number of tourists visiting Peel has declined by 16.2%. Tourist expenditure increased by 20.4% to reach \$144.7 million over the five years to 2009. In 2010 international tourist expenditure was \$20.4 million and domestic tourist expenditure was \$124.3 million.

Travel parties comprised mostly adult couples for both domestic (29%) and international (41%) visitors. This was followed by family groups of parents and children; domestic 25% and international 38%.



Peel Agriculture

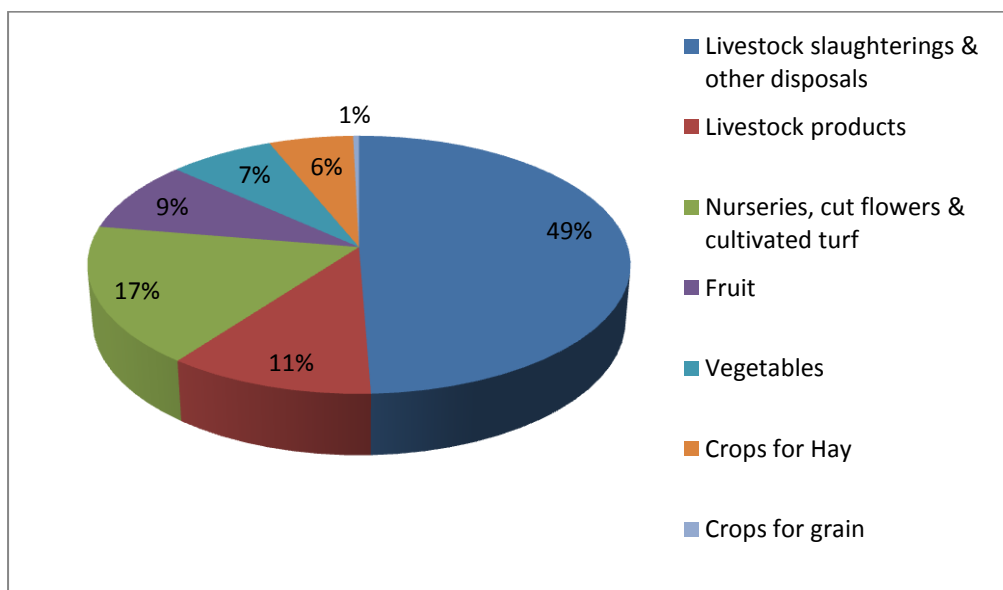
In the 2010 financial year, agricultural production contributed and estimated \$183 million to the Peel Region's economy and represented 3.18% of the total value of agricultural production in the State. From the previous financial year, the value of agricultural production in Peel increased by 41.5% while the value of agricultural production in WA declined by 20%.

In 2010 livestock disposals represented the largest part of the Peel's agricultural economy with these forming 49.4% of the Region's agricultural value. The majority of

this was from pig and poultry farming. Cumulatively livestock products including egg, milk and wool contributed 10.9% to the region’s agricultural economy.

Crops grown in the Peel Region include fruit, vegetables, grains, hay, turf and nursery products. Cultivated turf was the most valuable crop in the Peel Region in 2010 making up 6% of the agricultural value. Fruits grown include oranges, pears, apples, berries and grapes.

Figure 8. Value of Agriculture

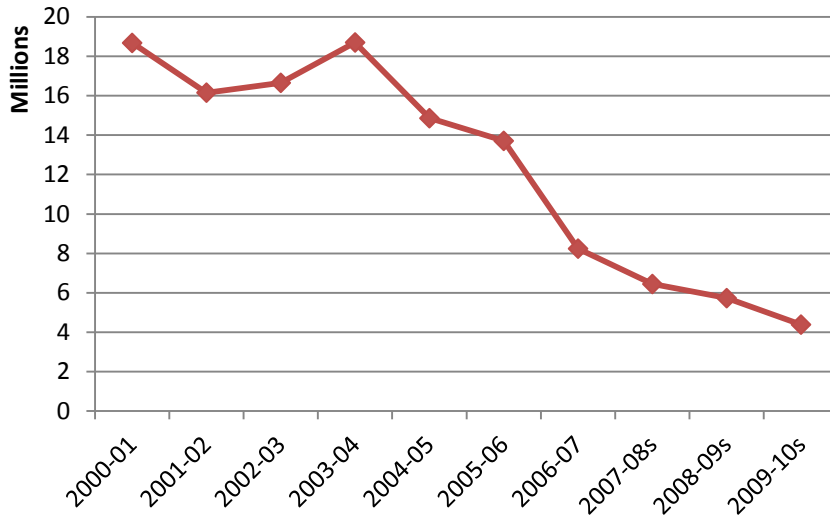


Source: ABS and Regional Development and Lands

Fishing

In 2009-2010 the Department of Fisheries estimated that the Peel catch size was 339 tonnes and worth \$4.38 million. Rock lobsters represented 84% of the total catch value, fish 9% and crabs 6%. The value of fishing in the Peel Region has been steadily declining since 2003-04, down 76.6%. The value of fishing in Western Australia has increased by 7% in the same time period.

Figure 9. Value of Fishing

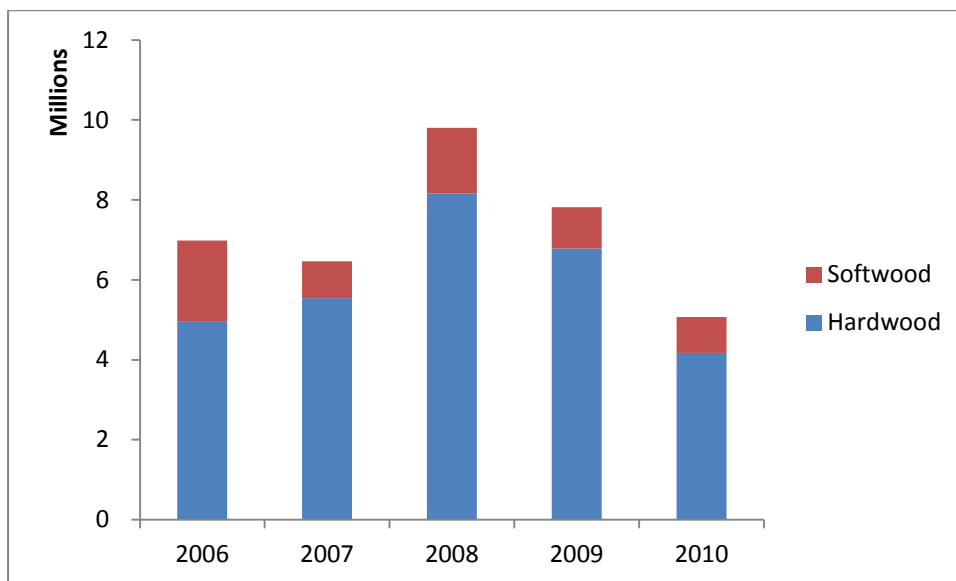


Source: Department of Fisheries and Regional Development and Lands

Forest Products

The total value of forest products for the Peel Region in 2010 was \$5.07 million. Hardwoods, including marri and jarrah, represented 82.4% of total value of forest products at \$4.2 million and softwood represented 17.6% of total forest products with a value of \$892,000. The Peel contributes 5.8% to the State’s total forest products. The value of forest products in the Peel Region declined by 35.2% from 2009-2010.

Figure 10. Value of Forest Products



Source: Forest Products Commission, Western Australia

Business Registrations

As at June 2009, there were 7,878 actively trading businesses registered in the Peel Region. The construction industry had the greatest proportion of registrations with 2,183 registered businesses. Over 70% of these were non-employing. Agriculture, forestry and fishing had the second highest number of actively trading registered businesses at 791.

This industry also had a majority of non-employing businesses (76.7%). Information, media and telecommunications had the lowest number of registered businesses (24), half of these were non-employing.

Mining, the leading contributor to Peel GRP, had 75 registered businesses, 56% of which were non-employing and manufacturing, the other major contributor to Peel GRP had 348 registered businesses, 57% of which were non-employing. Retail trade, one of the largest employers in the region, had 564 actively trading registered businesses, of which 40% were non-employing.

Infrastructure

A current shortage of industrial land is having a negative impact on economic, business and jobs growth in the Peel Region and the development of industrial land has been identified as the region's highest infrastructure priority.

Serpentine-Jarrahdale Shire and Waroona Shire both have sites under consideration and an initial subdivision of industrial land has occurred at Boddington. The proposed Nambelup industrial site in the Shire of Murray is strategically located beside the new Kwinana Freeway and is close to both Mandurah City and the proposed Keralup Housing Estate. Approval has been recently given for an Outline Development Plan (ODP) for a portion of the estate.

Project Investment

As at March 2012, there were two projects under consideration in the Peel Region. Construction is anticipated to begin shortly, on a secondary school and primary

school, both located in Byford, both expected to be completed in 2013. Combined these schools represent a total value of \$44 million. There are no other projects under construction or committed in the Peel region.

SOCIAL

Education

The Peel Region has a number of education and training options available including schools, vocational education and training providers and university.

There are 43 schools in the Peel Region, offering pre-primary, primary and secondary education. 12 of these are private schools, 31 are public. As at Semester 1, 2012, a total of 18,675 students were attending school in the Peel Region with 6,991 attending a private school and 11,684 attending a public school.

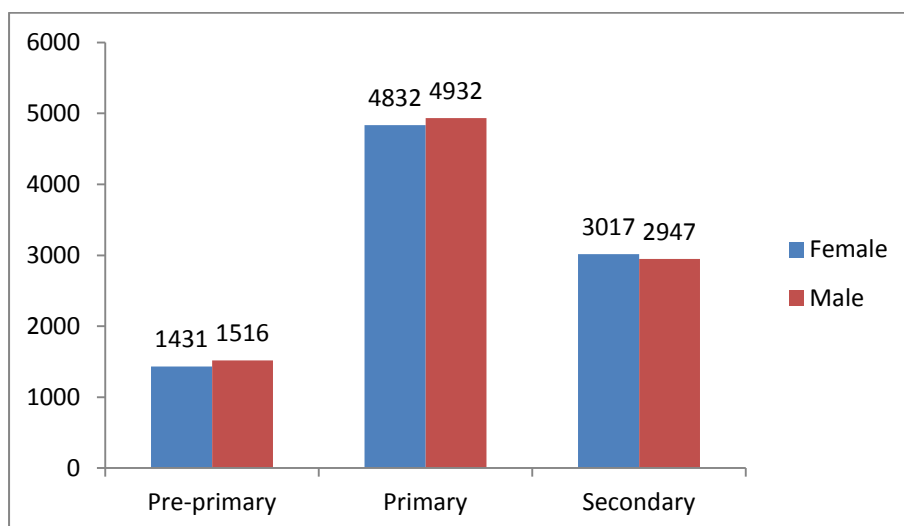
From Semester 1 2011 to Semester 2 2012 student enrolments in the Peel Region increased by 12.1%, reflecting a rapidly growing population. Student numbers have increased by 3.6% at private schools and 8.4% at public schools.

To accommodate increasing student numbers, more schools are opening in the Region. The private Austin Cove Baptist College opened in 2011 and Meadow Springs Primary School, public, opened in 2012. An additional two new public schools are under construction – a primary school at West Byford and a public secondary school in Byford, both due to open in 2014. John Tonkin College opened in 2012 and was formed by the amalgamation of Mandurah Senior College and Mandurah High School.



The largest portion of school students in the Peel Region, 52.3%, are in primary school, 31.9% are in secondary school and 15.8% are in pre-primary school with a fairly equal balance between males and females.

Figure 11. School Students Semester 1 - 2012



Source: Western Australian Department of Education and Training

Aboriginal students make up 4.32% of the school student population in the Peel Region. Of the 805 students who identified as being aboriginal – 105 were in pre-primary, 445 were in primary and 204 were in secondary classes.

As at Semester 1, 2012, schools in the Region employ the equivalent of 1289.3 full time equivalent staff including management, specialist teaching staff, teachers, administrators, and property service staff.

For post-secondary education, the Peel Region is serviced by the Peel Education Campus which is a multi-partnered complex comprising Challenger Institute of Technology (vocational education and training) and a campus of Murdoch University. John Tonkin Senior College is also a partner of the Peel Education Campus. This unique arrangement offers flexible learning pathways to students.

The Peel Campus of Murdoch University offers commerce and nursing qualifications as well as bridging courses. In 2011 the Peel campus had a total of 402 students enrolled with 94% of these studying nursing programs. 90% of all students were

female and the median student age was 24.5 years. Of all students, 6 identified as indigenous, 21 disabled and 19 from a non-English speaking background. Significantly, 49% were of low socio-economic status.

Challenger Institute of Technology offers a range of courses including community services, financial services, beauty therapy, visual arts, laboratory skills, metal fabrication and courses relevant to the construction industry. While its main site is at the Peel Education Campus, Access Centres have been established, in partnership with community learning centres in Boddington, Waroona, Pinjarra and Mundijong.

There are also a number of private training providers who provide vocational education and training in the Peel Region.

Health

The Peel Region has hospitals, community health centres, child health centres, and GP clinics. There are also allied health professionals such as physiotherapists, dentists and psychologists working privately in the area.

Peel's major health care provider is the Peel Health Campus, which has been in operation since 1997. Peel Health Campus offers public and private hospital services and is managed by Health Solutions on behalf of the Western Australian government. Peel Health Campus has 208 beds. There is also a 12 bed hospital in Boddington and Pinjarra is home to the Murray Hospital which has 16 beds.

Child health clinics are located in all local government areas and major community health centres are located in Mandurah, Pinjarra and Boddington, with the Boddington facility having opened in 2011.

There are 96 general practitioners working in the Peel Region.



Crime

There are 145.1 full time equivalent (FTE) police officers in the Peel Region. This comprises of 110.6 in Mandurah, 14 in Mundijong, 8.5 in Pinjarra, 6 in Waroona, 4 in Boddington and 2 in Dwellingup. The Mandurah Police Service includes forensic officers, detectives, general, traffic and administrative staff.

There were 749 crimes reported in the Peel Region in the 2011 September Quarter. Boddington Shire had the lowest crime rate with no reported crimes. Mandurah City had the highest crime rate with reported 571 crimes.

The category of Burglary (dwelling) held the highest number of Peel Region offences reported with 297. Boddington had the lowest recorded rate of Burglary (dwelling) with none and Mandurah had the highest with 234.

Housing

According to the 2006 ABS Census there were 32,891 occupied private dwellings in the Peel Region. Of these 11,313 (34.4%) were fully owned, 10,861 (33%) were being purchased and the rest were rented (22.9%) or fell under the categories of other tenure or not stated.

Average house prices in the Peel Region grew by 14.2% in the ten years to 2010. Jarrahdale had the highest growth rate at 16.7%, followed by Serpentine at 14.6%. Mandurah/Murray had the lowest growth with 12.2%.

ENVIRONMENT

Climate

The Peel Region experiences a climate that is best described as 'Mediterranean' with hot dry summers and cool wet winters. During summer hot dry easterly winds prevail. Normally there is little rain during summer, however occasional thunderstorms and remnant tropical cyclones can produce heavy rainfall. Winter usually brings consistent rainfall.

Temperatures average 29°C during summer, however can reach over 38°C. The summer minimum average temperature is 17.9°C. Winter temperatures range from a minimum of 9.4°C to a maximum of 17.5°C.

Estuarine

The most significant environmental feature in the Peel Region is the Peel-Harvey Estuary which is fed by the Murray, Serpentine and Harvey Rivers. Together the Peel Inlet and Harvey Estuary form a large shallow basin, covering approximately 130 km². This is more than two and a half times the size of the Swan River Estuary.

The Peel Inlet is a roughly circular lagoon with a diameter of approximately 10 km. It is connected to the ocean by a narrow inlet channel at Mandurah. The Harvey Estuary is narrow, approximately 20 km long and 2-3 km wide. It is connected to the ocean by a man-made channel at Dawesville. More than half the area of the Peel-Harvey Estuary is less than 0.5 metres deep.

A significant feature in the Peel Region is the thrombolite reefs of Yalgorup National Park. Thrombolites, one of the earliest known life forms, are a particular type of microbialite that have a clotted internal structure. They were common 600 million years ago. The Lake Clifton thrombolites cover an area 6 kilometres long and 120 metres wide.

Ocean

There are a number of reef systems off the Peel coast. The Murray Reef system runs from Warnbro Sound to Halls Head, approximately 5 nautical miles offshore. Murray, James Service and Horseshoe Reef are some of the notable reefs within this system. Approximately 3 nautical miles off the coast is Bouvard Reef. This system runs from Cape Bouvard to south of Preston Beach. There are several more reefs between Halls Head and Tim's Thicket.

All the local reefs are limestone covered with coral and weed. The water depth inside these systems averages 10 metres. Water depth increases from 17 metres to 25 metres approximately 7 nautical miles offshore at the five fathom bank

Water Resources

Water is a significant feature of the Peel Region, with over one third of the coastal plain within 100 metres of an identifiable watercourse.



Dams in the Peel Region contribute more than 50% to the total capacity of the State's Integrated Water Supply System (IWSS).

The IWSS is the largest scheme managed by Water Corporation, with a total capacity of 622 GL, and supplies over 1.5 million Western Australians with water.

The three major dams are at Serpentine, South Dandalup and North Dandalup. North Dandalup is the smallest dam with a capacity of 75 GL and a surface area of 510 hectares when full. It has a catchment area of 153 km². South Dandalup, the largest dam, has a capacity of 208 GL and has a surface area of 2100 hectares when full. Its catchment area is 311 km². Serpentine has two dams, the Serpentine Dam and the Serpentine Pipe Head Dam. Together they have a capacity of 141 GL, a surface area of 1,128 hectares when full and a catchment

area of 692 km².

Vegetation

A wide variety of flora is contained within the Peel Region. Tuart and jarrah are endemic to the coastal plain and are found in the open forest of the Spearwood Dunes, along with marri.

Coastal Vegetation

The understorey of this region consists of banksia, peppermint, she-oak, hakea and acacia. Tuart, peppermint and acacia are also found along the Quindalup Dunes. Swamp she-oak and salt water paperbark are found along the Peel-Harvey Estuary shore line with samphire marshes occurring on the low lying flood prone areas.

The Darling Scarp and Pinjarra Plain have both been largely cleared for pasture; however there are still remnant areas of marri, wandoo and jarrah. Ghost gums also appear on the Darling Scarp. Some pockets of banksia, she-oak and grass trees can still be found on the Pinjarra Plain.

Jarrah is the principal form of vegetation found on the mostly uncleared Darling Plateau.

There are also scattered marri and an understorey of banksia and she-oak.



Fauna

The Peel Region has a large bird population with over 130 species being identified. Although few birds breed in this region it is a significant feeding area for native and migratory birds. Some birds, including the red-necked stint and the curlew sandpiper migrate from as far away as the northern hemisphere. Others such as musk and black ducks breed in other areas of Western Australia and

migrate to the Peel waterways to feed in summer.

Birds found around the Peel waterways include black swan, fairy terns, cormorants, little egrets and pelicans.

A wide range of birds, including 28 parrots, kookaburras and splendid wrens can be found in the inland areas. Two out of the three species of cockatoo found in the area are endangered.

Two rare bird species, peregrine falcon and red-eared firetail finch, have been identified in the area.

Mammal species of the region include brush wallaby, short-nosed bandicoot, mardo, echidna, pygmy possum, dunnart, western native quoll and grey kangaroo. Quokkas can be found around stream and swamp areas.

Whiting, tailor, mulloway, cobbler and mullet can be caught in the waters of the Peel- Harvey Estuary, along with blue manna crabs and king prawns. Fresh water species found in the Peel Region are redfin, western pygmy perch, rainbow trout and western minnow. Marron is common in many rivers and dams.



Further Information:

For more information please contact the Peel Development Commission (see back cover) or visit the following websites:

Australian Bureau of Statistics

www.abs.gov.au

Australian Curriculum, Assessment and Reporting Authority

www.myschool.edu.au/

Australian Taxation Office

www.ato.gov.au/

Department of Education

www.det.wa.edu.au

Department of Education, Employment and Workplace Relations

www.deewr.gov.au

Department of Fisheries

www.fish.wa.gov.au/

Department of Health

www.health.wa.gov.au

Department of Mines and Petroleum

www.dmp.wa.gov.au

Department of Regional Development and Lands

www.rdl.wa.gov.au

Forest Products Commission

www.fpc.wa.gov.au/

Newmont Asia Pacific

www.newmont.com/asia-pacific

Peel-Harvey Catchment Council

www.peel-harvey.org.au/

Real Estate Institute of WA

www.reiwa.com.au/Pages

Tourism Western Australia

www.tourism.wa.gov.au/

Water Corporation

www.watercorporation.com.au

Western Australia Police

www.police.wa.gov.au

Peel Development Commission

“Building A Better Future For The Peel”

OUR VISION

For Peel to be recognised as a uniquely beautiful and sustainable place to live, work and visit.

OUR MISSION

Develop and enhance the opportunities of the Peel people, economy and environment by providing strong leadership and engaging in effective and innovative partnerships to achieve the vision.

The Peel Development Commission is one of nine Regional Development Commissions in Western Australia. As State Government Statutory Authorities the Development Commissions report to the Honourable Brendon Grylls MLA, Minister for Regional Development. The Peel Development Commission has a board of directors, the members of which are appointed by the Minister. These appointments consist of one third community representatives, one third nominated by local government and one third appointed at the Minister's discretion.

The Peel Development Commission is governed by the *Regional Development Commission Act 1993* to work towards:

Maximising job creation and improving career opportunities

Developing and broadening the Region's economic base

Identifying infrastructure services to promote economic and social development

Providing information and advice to promote business development

Ensuring equitable delivery of services

By partnering with industry, community and government agencies, the Commission initiates and accelerates regional development projects that have a sustainable benefit to the Peel Region. The Commission is the regional conduit between State Government Policy and regional aspirations.

The Commission's staff are specialised in various areas of regional development and can assist with general advice through to dedicated project management.

For further information about this publication or the Peel Development Commission enquiries can be directed to:

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This publication is available in alternative formats on application to the Peel Development Commission..